

2025-06-19

UAM, Guanajuato Turn Agricultural Waste Into Aviation Fuel

Autor: Redacción

Género: Nota Informativa

<https://mexicobusiness.news/aerospace/news/uam-guanajuato-turn-agricultural-waste-aviation-fuel>

The Autonomous Metropolitan University (UAM) Iztapalapa, in partnership with the Universidad de Guanajuato, has developed an innovative process to produce Sustainable Aviation Fuel (SAF) from agricultural waste. Known as Furanos-to-Jet (FTJ), the method leverages furans compounds formed during biomass degradation as precursors for jet fuel.

Dr. Gabriel Contreras Zarazúa, a chemical engineering expert and lead researcher, highlighted the FTJ process's advantages over existing SAF production methods like Hydroprocessed Esters and Fatty Acids (HEFA) and Alcohol-to-Jet (ATJ). He explained that furans offer properties essential for SAF, such as suitable freezing points and densities, which alcohol-based intermediates lack.

Developed entirely in Mexico, the FTJ process earned third place in the 2025 Airbus SAF Award, presented during the 2025 Aerospace Fair (FAMEX). This recognition underscores the project's importance in advancing sustainable aviation in the country.

Dr. Contreras Zarazúa estimates that SAF production in Mexico could begin within two to three years but identifies a key obstacle: insufficient collaboration between academia and industry. "There are many excellent ideas in academia with scaling potential, but no connection with industry," he told A21.

He also stressed the need to engage with farmers who produce the biomass necessary for SAF. "The missing piece is the entire biomass supply chain. Once that is in place, building the technology will be the easiest part," he added.

Regarding infrastructure, Dr. Contreras Zarazúa suggested repurposing existing facilities from Petróleos Mexicanos (PEMEX) but advocated for dedicated biorefineries near biomass sources to reduce costs and emissions. For instance, sugarcane residues could be processed in coastal areas, while agave waste would require specialized facilities in Jalisco, tailored to local agricultural byproducts.

The project has attracted interest from private companies like Airbus and Aeroméxico, reflecting growing support for sustainable aviation in Mexico. Dr. Contreras Zarazúa called for a collaborative effort among government, industry, and academia to overcome barriers and accelerate SAF development.

This breakthrough positions Mexico as a potential leader in SAF production in Latin America, aligning with global goals to achieve net-zero aviation emissions by 2050.